

Glass mts. 1956
with C.O. Dunbar
August
1956

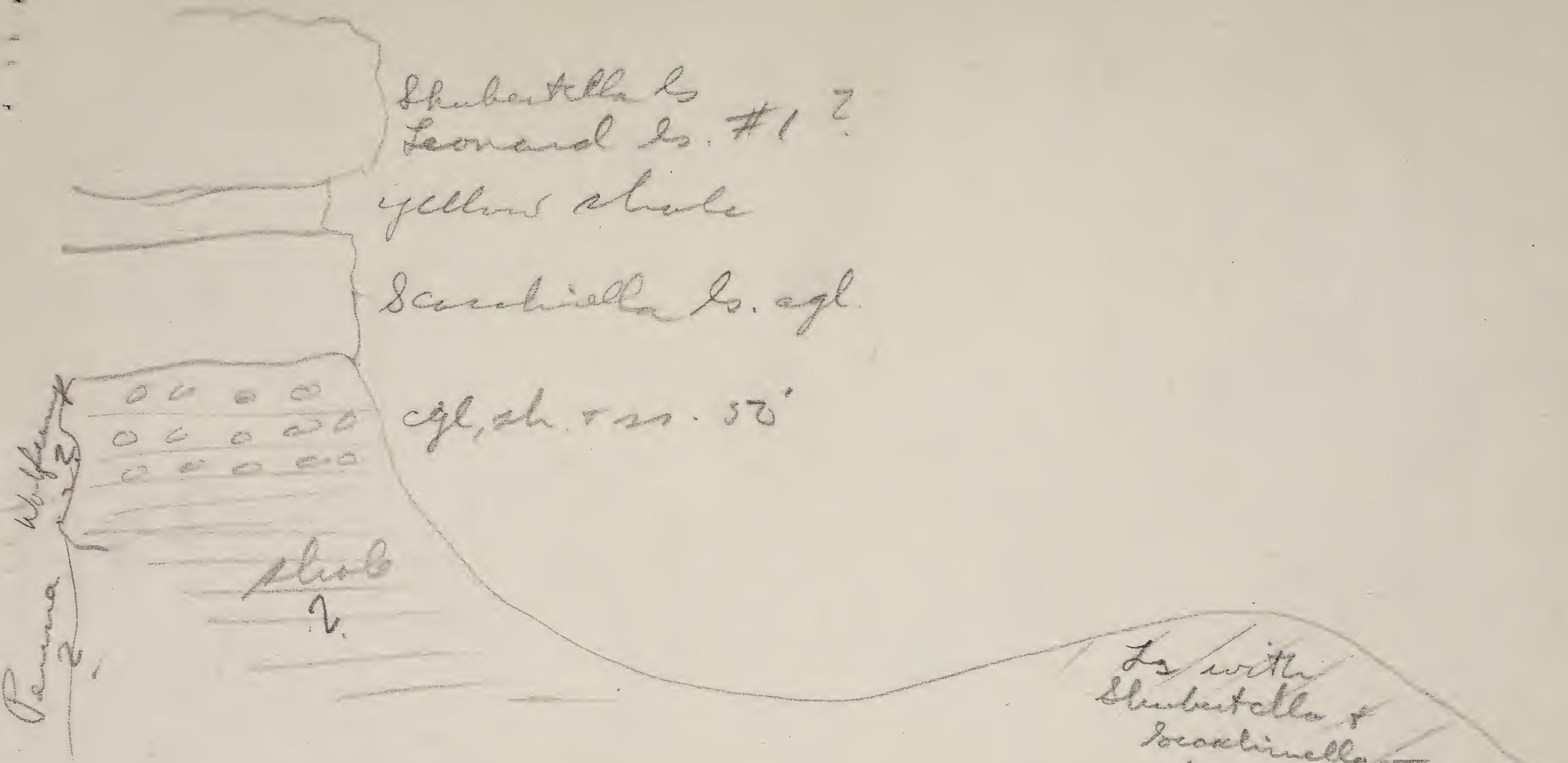
①

Aug 18, 1956

Visited Windmill Hill and studied knobs at base. These are thought by Dunbar & Skinner to be slumps. This would eliminate any Wolfcamp outcrop low in this hill. As a matter of fact according to the views expressed there would be no Wolfcamp here unless it be the 40 or 53' of cgl sh. + ss beneath the Seacchimella ledge. The upper beds + the ls I think belong to ls 1 of the Leonard are full of the small fusuline *Slebentella*.

Aug 19.

Leonard Mtn. - Large knob in southeast angle of mountain is now thought to be a slumped block. It has dips of about 45°. The *Uddenites* shale seems to be OK but may be lower in the Pennsylvanian than *Uddenites*. Fusulines from top of knob to base of big conglomerate were thought by Skinner to be of Gaytanke age.



② The big conglomerate is either top Permian or lower Pennian probably the latter. The Second Limestone bed just on top of this cgl. contains Wolfgang fossilines and is now thought to be upper Wolfgang. It is thought that Wolfgang extends to base of King's Head dolomite. The sequence now is greatly different from the published section.

In afternoon visited wet end of hill $\frac{1}{2}$ mile N of Hess Ranch House. Fossilines here were fossilized and Wolfgang.

Aug 21

In Oldenits saddle in Wolfgang hills Bed 2 on N side saddle is about 25'. Bed 4 appears on both sides saddle opposite first gully to N up canyon top of bed 2 and conglomeratic base of bed 4 come together. My collection seem to be in top of bed 2 but may be in nubby 4. Base of 4 all along is cgl.

③ with rounded ls. pebbles.
 Just above (E) of ravine from N
interval between 4 & 2 inches
 but at entrance to ravine from
 S the bed 2 is in the bed
 of the canyon & forms cascades
 At mouth of S ravine
 shale between 2 & 4 is about 15'
 and 4 goes east on N side
 of ravine. Rounded surface
 of bed 2 forms W wall of
 south gully. Up south gully
 which turns to go east, gully
 cuts along abrupt face of bed 2.
 Shale between 12 + 4 thickening
 considerably.

N down slope from end of 4
 in ravine. Long slope goes
 thru shale & ls lenses to
 bed 9. Dip slope of hill to bend
 of Canyon is mostly in and
 above 9. Bioluminal bivalves &
 ls lenses appear scattered over
 surfaces.

^{bed 12 &}
^{bed 9}
 bed 9' bioluminal bivalve
 ls lenses appear scattered over
 surfaces.

One bioluminal bivalve has many
 fucus algae.

Bed 9 crosses stream exactly
 at the elbow of the canyon!
 At this point there are two
 limestones the lowest about 4'
 thick, then about 10' of shale
 followed by another also
 about 4' thick.

(4)

Bed 4 is in stream 105
paces down from lower
ledge of bed 7.

In bed 4 at E-W gully on long
slope saw a fine *Streptorhynchus*
embedded in surface. My Schizophilus
beds are definitely in part of 7.
Bed 4 varies greatly in thickness.
has bioherms in it and varies
in distance above bed 2.
The shale between 4 & steeply sloping
2 is cut out to form the ravine.

Section up W side of
north ravine. Dip used $\pm 10^\circ$.

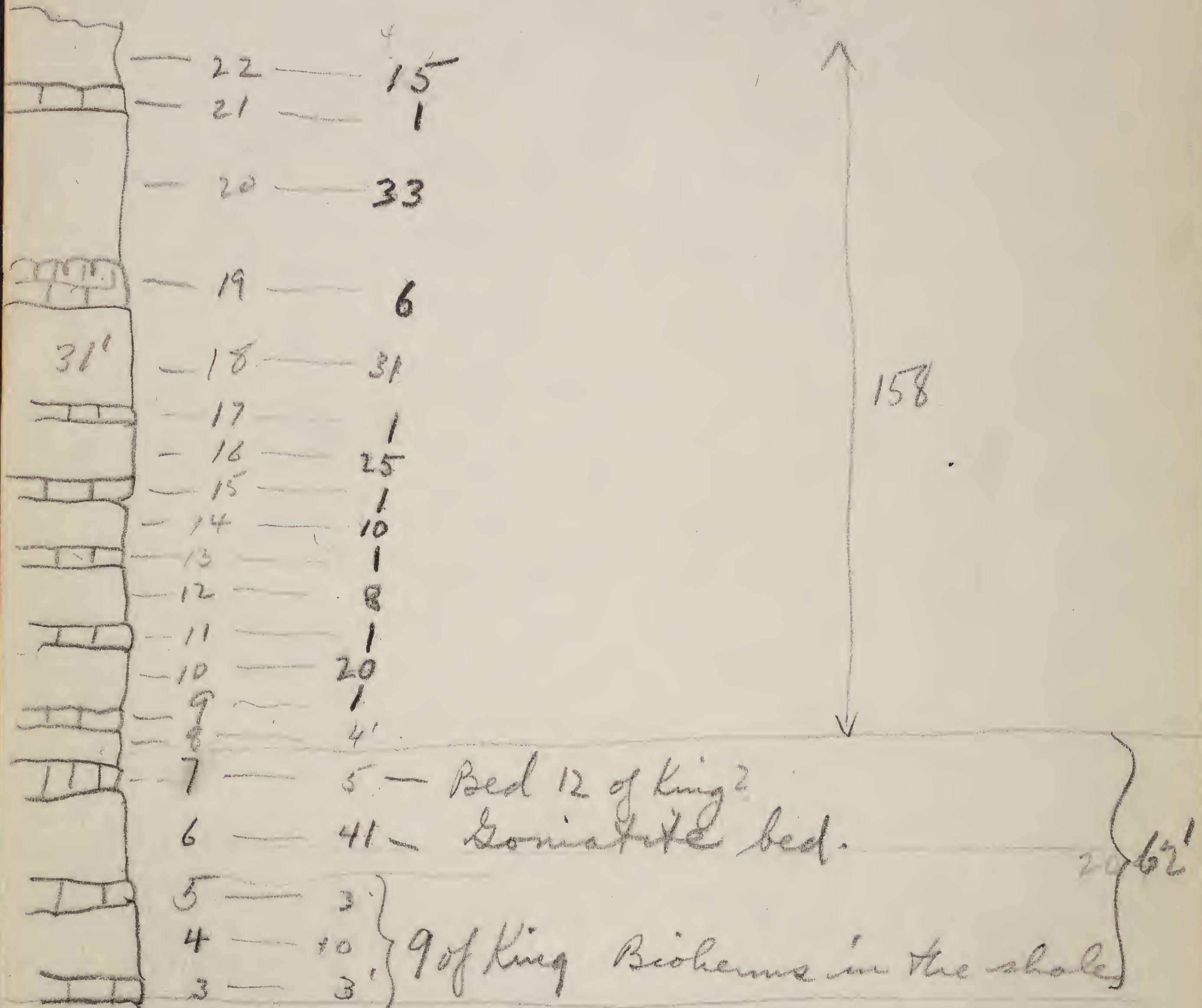
2 cl^s 23 steps at $10^\circ + 2'$ all in
shale with possible limestone
lenses = 127'

3. yellow weathering limestone,
granular conglomeratic, bioherms
about 3' thick at this place.
This would be base of bed 7 at
hill to west.

4. Shale about 10' thick with one
thin ls 3-4" thick about 2' from
base

5. Coarsely granular ls. about
 $1\frac{1}{2}'$ thick - 3'

6. Shale with scattered ls
lenses & biohermal masses.
Proprirites. Top with cobbley



shale

2 = 160

Bed 4

1

364' Total

⑤. Limestone abounding in big
fusiliers at very top! 4 $\frac{1}{10}$ "
20'

7. Granular, yellow weathering
ls. with Prod. bivalves 5"

8 shale about 4'

9 limestone, granular orange-yellow 1'

10 Shale 20' with 4" layers of
yellow ls. at middle

11 Granular limestone, flat-topped
1"-1 $\frac{1}{2}$ ' thick

12 Shale 8'

13 Yellow granular ls. $\frac{1}{2}$ '-1' thick

14 Shale 15' but thin 2-3" ls
one to 2' above base

15 Limestone platy 6"-9" thick

16 25' of shale with thin
yellow ls scattered in it

17. Limestone with small
rounded ls pebbles, about 9"

18 31' shales

19 Limestone granular, bivalve

⑥ six feet thick where measured
but thinning or thickening laterally

20 Shale 33'

- 21 limestone gravel, yellow
one foot thick. Fusulines rough
22 Yellow Wolfcamp float in Hess
cobbles suggests an additional
10-15' of section

On west side of adductor the
bed 9 also forms a double
tier and many brokenness
appear to complicate the
situation. What we call bed
10 appears down the slope
to the north of bed 9 and
never makes a cliff or
ledge. All my collections
should be labelled 9-12 or
given some other designation.
But would be best to call
all collections from 701d
upper Wolfcamp rather than
bed 12. I would guess that
part of the section to be
mainly above bed 12.

My 701l most certainly
is in bed 2 and is about 200'
below top of hill, at base
of slope at 701l bed 2 in

Bed 4
1/467

P. is low on the flank of the hill, perhaps 25'-50' above floor of reentrant. From the top of 2 to bed four there must be 50-60' because the interval spreads out widely and includes a sandstone bed of a foot or two thickness as well as some other limestones.

Aug 23

Visited Hess Ranch to see Ward Limestone. The limestone consists of 2 beds, one a thick heavy-bedded limestone below a bioclastic limestone in which colonial tetracorals are fairly common. Brachiopods are rare. Collected two blocks from two places along this slope.

0440

O. Blocks

Decie Windmill)

705a

Wolfcamp 701K

Wolfcamp 701H

" 701

707h

709 ~~b~~ C

706 b

Aug 23
706 f

4
2
1
4
1
2
2
4
1
1

With one box shipment
came to 2057 pounds.